## Claims

1. Method for mechanical joining of stacked plate-shaped joining partners, particularly of sheets (4, 5) by means of punch riveting with semitubular rivet using tools situated above and beneath of the joining partners, whereby the semitubular rivet penetrates linearly into the joining partners **characterized in that** during the axial feeding movement of the semitubular rivet the upper tool (7) or/and a portion (8) of the lower tool are given a wobbling additional movement in radial and/or tangential direction.

2. Method to Claim 1 **characterized in that** a semitubular rivet with material accumulations in critical areas (6a to 6e) is used.

3. Method to Claim 1 or 2 **characterized in that** during the simultaneous wobbling additional movement of the upper tool (7) and a portion (8) of the lower tool these carry out a synchronized movement.

4. Method to Claim 1 to 3 **characterized in that** the wobbling additional movement is carried out with a wobbling angle (10) between 1° and 10°.

5. Device for carrying out the method to any of the Claims 1 to 4, which consists of an upper tool (7), a lower tool (8, 9), a die (9) fixed in axial direction and a feeding device for the auxiliary joining part **characterized in that** the upper tool (7) or/and a portion (8) of the lower tool is/are supported such that they can be given a wobbling movement in radial and/or tangential directions.

6. Device to Claim 5 **characterized in that** the die (9) is a split die.

7. Device to Claim 5 **characterized in that** for a not wobbling portion (8) of the lower tool the single parts (8, 9) are constructed as one part.

8. Auxiliar joining part for carrying out the process to any of the Claims 1 to 4 designed as a semitubular rivet **characterized in that** the semitubular rivet has material accumulations in critical areas (6a to 6e).

9. Auxiliar joining part to Claim 8 **characterized in that** the semitubular rivet has a material accumulation shaped as a convex elevation on the rivet head (6a).

10. Auxiliar joining part to Claim 8 or 9 **characterized in that** the inner contour (6d, 6e) and outer contour (6b, 6c) of the semitubular rivet is described by tractrix curves in each case, whereby the starting points of the curves are located in direction of the rivet foot and the transfer of the curves in the centre is shaped tangentially.

With 3 sheets of drawings.